

Supplementing Cognitive Interviewing by Eye Tracking to Pretest Survey Questions

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Shortcomings of Cognitive Interviews

- Reactive method, interviewer effects
- Qualitative data (subjective interpretation)
- Inability of respondents to verbally express themselves
- Difference between laboratory and field settings

Benefits of Eye Tracking

- Nonreactive behavior
- No interviewer effects
- More objective data
- Quantitative data
- No bias in ability to express oneself verbally

But: Eye tracking alone does not provide direct access to a participant's thoughts



Combining cognitive interviewing and eye tracking to pretest survey questions

Research question

- Is eye tracking an effective supplement to cognitive interviewing?
- Do both approaches identify the same questions as problematic?
- Do both approaches identify the same number of problems?
- Do they reveal the same or different types of problems?

Experimental Study

Eye tracking and cognitive interviewing (3-step design)	Cognitive interviewing
<ol style="list-style-type: none"> 1. Tracking of eye movements and observation of behavior 2. Cognitive interviews with a standardized interview protocol 3. Additional probing questions 	<p>--</p> <p>Cognitive interviews with a standardized interview protocol</p> <p>Additional probing questions</p>
<p>Standardized interview protocol with predefined probing questions for 13 items/questions of a 52-item questionnaire</p> <p>Administration of all questions</p>	

Experimental Study

- Peculiar reading patterns:
- long/repeated fixations on a word
- re-readings of specific words or text passages
- regressions from answers to question text
- correction of the chosen response category
- skipping questions



Experimental Study

- Participants: N = 83 (41/42), Mage = 36, from 17 to 76
- 52 questions/items
- Questions adapted from ISSP, ESS, ALLBUS
- 5 Interviewers, each one conducted an equal number of interviews in both conditions
- Interview protocol: Predefined general probing questions

Results:

Number of problematic questions identified

Eye tracking: 25

Cognitive interviewing: 20

Eye tracking identifies a problematic question	Cognitive interview identifies a problematic question	Problematic questions
Yes	Yes	18
Yes	No	7
No	Yes	2

Results:

Number and Types of unique problems

Number of unique problems identified	CI	EYE
Overall	164	166
Type of problems		
Comprehension	84,1 % (138)	83,7 % (139)
Retrieval	1,8 % (3)	1,2 % (2)
Judgment	2,4 % (4)	3,0 % (5)
Response Selection	11,6 % (19)	11,5 % (19)
Questionnaire Navigation	0,0 % (--)	0,6 % (1)

Conclusion

- Eye tracking is a useful supplement
- Eye tracking provides additional insights into the behavior of participants and the underlying response processes
- Eye tracking allows to screen an entire questionnaire
- Eye tracking is slightly more time consuming

Thank you for your attention!

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